

Remarks

Applicants respectfully request the Examiner to reconsider the present application in view of the foregoing amendments to the claims and the following remarks.

The Office Action is non-final. Claims 6 and 8-10 are currently pending. Claims 6 and 8 have been amended to further clarify and define the invention. Claims 6 and 8 have been amended to a method for producing an acidic-soluble soybean protein material. Support for claim 6 can be found on page 7, lines 17-18, page 8, lines 16-23, and page 15, line 24, to page 16, line 7, of the present specification. Claims 9 and 10 are new. Claims 9 and 10 relate to a method for relieving an astringency derived from an acidic-soluble soybean protein and preventing a formation of dregs of the cloudy-type fruit juice. Support for claim 9 is found on page 4, lines 10-24, page 6, line 20, to page 7, line 4, page 7, lines 17-18, page 8, lines 16-23, and page 9, line 21, to page 10, line 9, of the present specification. Claim 10 is based on support on page 6, lines 9-12, of the present specification.

Entry of the present Amendment is respectfully requested.

Rejection Under 35 U.S.C. § 112, Second Paragraph

Claims 6 and 8 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

Applicants respectfully traverse the rejection.

The Examiner asserts that claim 6 recites the phrase “relieved astringency,” which renders the claim indefinite since it is unclear to the Examiner what astringency is being measured against (*i.e.*, to what degree) and it is not clear as to what properties (either sensory or physical) that is encompassed by the term “relieved.”

Applicants respectfully disagree. Astringency of the presently claimed invention is explained in detail on page 4, lines 3-14 and page 6, lines 15-19, of the present specification.

Additionally, Applicants submit that it is clear that the astringency of the presently claimed invention is evaluated by sensory evaluation (see page 20, lines 1-2 of the specification). Applicants note that the data that was actually evaluated is described in Table 1 (see page 22 of the present specification).

Applicants contend that based on the above, one skilled in the art can interpret the phrase “relieved astringency” within claim 6 to be “relieved astringency in sensory evaluation compared to an acidic-soluble soybean protein material without adding salts or saccharides.” Applicants submit that claim 6 is clear and particularly points out and distinctly claims the subject matter the Applicants regard as the invention.

Since claim 8 depends from claim 6, this claim is clear for the same reasoning above.

Applicants respectfully request reconsideration and withdrawal of the rejection.

Rejection Under 35 U.S.C. § 103(a)

Claims 1 and 3-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakayama *et al.*, U.S. Patent No. 6,287,623 (hereinafter “Nakayama”) in view of Saito *et al.*, the English Abstract and Machine Translation of WO 02/067690 (hereinafter “Saito”).

Applicants have cancelled claims 1, 3-5 and 7, thus rendering moot the rejection as to these claims. Applicants respectfully traverse the rejection as to the remaining claims.

The Examiner’s Position

The Examiner asserts that the present application is obvious in light of the Nakayama and Saito references, as indicated on pages 3-6 of the outstanding Office Action.

Based on the following, Applicants contend that the Examiner’s position is not supportable, thereby making the presently claimed invention unobvious over the Nakayama and Saito references.

Applicants' Position

The presently claimed invention is directed to a method for producing an acidic-soluble soybean protein material with relieved astringency which comprises adding one or more salts or saccharides selected from the group consisting of water-soluble soybean polysaccharides, gum arabic, gum tragacanth, locust bean gum, guar gum, glucomannan, psyllium seed gum, tamarind seed gum, tara gum, alginic acid, carrageenan, agar, fucellaran, pectin, curdlan, xanthan gum, gellan gum, pullulan, polydextrose, slightly-digestible dextrin, guar gum degradation products, psyllium seed coat, low-molecular weight sodium alginate, inulin, and modified food starch, water-soluble basic salts, alkali metal salts of organic acids, basic monosaccharides and basic oligosaccharides; to the acidic-soluble soybean protein during preparation of the powdery acidic-soluble soybean protein. The acidic-soluble soybean protein has a solubility of 55% or higher at a pH 2.0 to 4.5, and the acidic-soluble soybean protein is not a hydrolysate thereof.

The presently claimed invention is also directed to a method for relieving an astringency derived from an acidic-soluble soybean protein, as indicated in new claims 9 and 10.

As indicated in MPEP § 2143, the Examiner must resolve the factors described in *Graham v. John Deere*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), which provides the controlling framework for an obviousness analysis, before utilizing the rationales that were established in *KSR Int'l Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007).

Differences between the Invention and the Cited References

Applicants provide the following information regarding the *Graham* factor of ascertaining the differences between the prior art and the claims that are at issue.

The Nakayama reference provides a method for producing a protein-containing acidic food and drink, which comprises processing a protein emulsion having a pH value that is higher than the isoelectric point of the protein in the emulsion at a high temperature to make the

emulsion having a pH value that is lower than the isoelectric point of the protein; and a protein-containing acidic food and drink containing protein, fat and oil, and water-soluble polysaccharide, in which the particles dispersed have a mean particle size of not greater than 15 μm (see Nakayama, column 2, lines 28-43).

Additionally, Nakayama describes that “the dispersed particles as referred to herein mean colloidal particles and the like that are in the food and drink in the form of a dispersion” (see Nakayama, column 7, lines 4-6).

In other words, the Nakayama reference intends to prevent precipitation of a protein which is insoluble under acidic conditions by making the protein to the high temperature when the pH of the protein passes the isoelectric point. If the acid-soluble soybean protein is used, the invention of the Nakayama reference need not be used since the acid-soluble soybean protein dissolves at the pH of isoelectric point.

Further, Applicants submit that the Nakayama reference does not disclose peculiar problems associated with an acid-soluble soybean protein. That is, the acidic-soluble soybean protein has stronger astringency than whey protein (see the present specification at page 7, lines 10-12), and astringency is caused by protein dissolved under acidic conditions (see also page 6, lines 15-17 of the present specification).

Accordingly, based on the above, Nakayama neither teaches nor suggests the relief of astringency, much less the relief of astringency by combining the specific water-soluble polysaccharides, etc. of the presently claimed invention.

Therefore, one of ordinary skill in the art would not be motivated to use the acid-soluble protein of Saito with the invention of Nakayama. That is, there is no motivation to combine Nakayama with Saito.

Applicants submit that based on the differences discussed above, the Examiner has not resolved the *Graham* factor of ascertaining the differences between the prior art and the claims that are at issue, and therefore the rationales the Examiner provides for the rejection are improper.

Applicants submit that the differences between the prior art references and the presently claimed invention are clear. Applicants note that although the above comments discuss the Nakayama reference individually, this was only for discussing this references in terms of the *Graham* factor analysis. Applicants submit that taking the above *Graham* analysis in mind, the combination of Nakayama with Saito does not lead to the presently claimed invention.

In light of the above amended claims and remarks, Applicants submit that the assertions made by the Examiner regarding the Nakayama and Saito reference are incorrect, thus failing to support the Examiner's position. Accordingly, based on the differences between the presently claimed invention and the above references, the cited references do not teach or suggest the presently claimed invention.

The secondary reference, Saito fails to remedy the deficiencies of Nakayama, outlined above.

Since amended claim 6 is not obvious to one of ordinary skill in the art, claim 8, which depends from claim 6, is unobvious over the Nakayama and Saito reference for the same reasoning discussed above.

Additionally, new claims 9 and 10 are also unobvious over the Nakayama and Saito reference for the same reasoning discussed above.

Applicants respectfully request reconsideration and withdrawal of the above rejections.

Conclusion

Applicants respectfully submit that all of the rejections raised by the Examiner have been overcome, and that the present application now stands in condition for allowance.

Should there be any outstanding matters that need to be resolved, the Examiner is respectfully requested to contact Paul D. Pyla at the telephone number below, in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized to charge payment or credit any overpayment to Deposit Account No. 23-0975 for any additional fees required under 37 C.F.R. §§1.16 or 1.17.

Respectfully submitted,

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